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Before the
Federal Communications Commission
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

North American Numbering Council Report)
Concerning Telephone Number Pooling and)
Other Optimization Measures)

NSD File No. L-98-134

In the Matter of)

Cellular Telecommunications Industry Associa-)
tion's Petition for Forbearance from Commer-)
cial Mobile Radio Services Number Portability)
Obligations)

WT Docket No. 98-229

To: The Commission

COMMENTS OF AIRTOUCH COMMUNICATIONS, INC.

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AIRTOUCH COMMUNICATIONS, INC.

Pamela J. Riley
David A. Gross
AirTouch Communications, Inc.
1818 N Street, N.W., Suite 800
Washington, D.C. 20036
(202) 293-3800

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SUMMARY

The Commission has linked wireless local number portability ("LNP") forbearance with the broader numbering issues raised by the NANC Report. AirTouch demonstrates that numbering resource concerns do *not* constitute a reason for applying LNP to wireless carriers. Wireless LNP will *not* facilitate more efficient use of numbering resources.

There are two reasons for the numbering shortage: growth in service to subscribers and allocation inefficiencies. The Commission should promote service growth by taking aim at inefficient allocation of numbers. The wireless industry needs numbers to accommodate real growth, and, as an industry, uses numbering resources efficiently. Thus, there is nothing to be gained from subjecting the industry to number pooling, and number utilization concerns (and the possible solution of LNP-based pooling) do not justify subjecting wireless carriers to LNP. Pooling will provide no benefit for them or for the public.

AirTouch includes in this filing considerable information about its own operations that demonstrates how efficient wireless carriers can be, given high growth rates and use of a limited number of rate centers.

Telecommunications growth generally has drastically accelerated the demands on numbering resources, exacerbated by the sprawling mass of small wireline rate centers, which has resulted in new wireline entrants placing disproportionate, inefficient demands on number resources. Only national guidelines will effectively solve a crisis that is national in scope.

AirTouch submits that there *are* concrete measures that will improve the efficiency of numbering resource utilization for the long term. The key measure is consolidation of wireline rate centers, which will shrink wireline carriers' need for multiple NXX codes and will promote far more efficient utilization of numbering resources. Other conservation measures can also be taken, such as thousands-block number pooling for wireline carriers and mandatory ten-digit dialing.

Finally, any comprehensive approach to solving the number exhaust problem must involve the Commission working with industry to achieve improved data-gathering procedures, establishment of standards, and compliance and enforcement of numbering policies.

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To: The Commission

COMMENTS OF AIRTOUCH COMMUNICATIONS, INC.

AirTouch Communications, Inc. ("AirTouch") hereby submits comments in response to the Common Carrier Bureau's November 6, 1998 Public Notice¹ seeking comment on the October 21, 1998 North American Numbering Council ("NANC") report on a variety of number conservation and optimization measures.² In addition, AirTouch responds to the Commission's December 16, 1998 *MO&O*³ seeking comment on how numbering resource optimization concerns should affect

¹ Public Notice, *Common Carrier Bureau Seeks Comment on North American Numbering Council Report Concerning Telephone Number Pooling and Other Optimization Measures*, NSD File No. L-98-134, DA 98-2265 (CCB Nov. 6, 1998).

² Number Resource Optimization Working Group, *Modified Report to the North American Numbering Council on Number Optimization Methods Dated October 21, 1998* ("NANC Report"), transmitted under cover of letter from Alan C. Hasselwander, Chairman, NANC, to Kathryn C. Brown, Chief, Common Carrier Bureau, dated October 21, 1998.

³ *CTIA Petition for Forbearance*, WT Docket 98-229, *Memorandum Opinion and Order*, FCC 98-330 (Dec. 16, 1998) (*MO&O*).

the resolution of a pending petition for forbearance from requiring wireless⁴ carriers to participate in local number portability (“LNP”).

INTRODUCTION

The *MO&O* explicitly links the wireless LNP forbearance proceeding and the broader issues of number conservation and optimization raised by the NANC Report. AirTouch welcomes this opportunity to confirm for the record that numbering resource concerns, and in particular number pooling techniques that build on LNP, do *not* constitute a reason for applying LNP to wireless carriers. Instead, with respect to wireless carriers, LNP will *not* facilitate more efficient use of numbering resources.

There are two reasons for the pressure on numbering resources: (1) numbers needed for growth in service, and (2) numbers made unavailable for serving real customers due to allocation inefficiencies. The Commission should target the second of these, which is wasteful, in order to make numbers available for service. The wireless industry needs numbers to accommodate real, continuous customer growth, not to provide “vanity” numbers, to ensure a presence in every local wireline rate center, or to warehouse unused numbers. As an industry, wireless carriers utilize numbering resources in a highly efficient manner. Because of this, there is nothing to be gained from subjecting the industry to number pooling. Consequently, number utilization concerns (and the possible solution of LNP-based pooling) do not justify subjecting wireless carriers to LNP. The Commission should not impose a costly LNP-based solution on wireless carriers when doing so will provide no benefit for them or for the public.

⁴ The terms “wireless” is used herein to refer to the Commercial Mobile Radio Services (“CMRS”).

Number resource optimization measures are needed because the growth of telecommunications services generally has drastically accelerated the demands placed on the nation's limited numbering resources. A key exacerbating factor is the geographic pattern in which the nation's wireline exchange plant developed — a sprawling mass of small rate centers. This has resulted in new wireline entrants placing disproportionate demands on numbering resources, and the consequences are inefficient use and a threat to the viability of the North American Numbering Plan.

The numbering shortage has reached crisis proportions in parts of the nation, and the problems are growing at an increasing rate — particularly in urban areas, since number exhaust is related to population density. It is critical, therefore, for the Commission to focus attention on tools that will have a lasting effect on number conservation and optimization in high-density areas, and not on “band-aids” that will help only in the short term or that will not help at all.

Given the need for a long-term perspective, this Commission needs to address what the long-term objectives are. Only a national scheme will effectively solve a crisis that is national in scope. AirTouch submits that there *are* concrete measures that will improve the efficiency of numbering resource utilization for the long term. The key is consolidation of wireline rate centers. This is critical — it will shrink wireline carriers' need for multiple NXX codes and will promote far more efficient utilization of numbering resources in many places. There are other measures that can also be taken to build on this improvement, chiefly thousands-block number pooling for wireline carriers and mandatory ten-digit dialing.

These steps can be taken separately or as a coordinated approach. Obviously, the need for such measures will vary from place to place. It is urgent to take such steps in the high-density areas where the number shortage exists, but there may be little or no need for number conservation measures in many rural areas. Accordingly, the Commission should establish national guidelines

for implementation of these steps and delegate authority to state regulators to determine when and where to put these measures in place.

Further, any comprehensive approach to solving the number exhaust problem should involve the Commission working with industry to achieve improved data-gathering procedures, establishment of standards, and compliance and enforcement of numbering policies. Accordingly, the Commission should:

- **Require carriers to submit COCUS (Central Office Code Utilization Surveys) data to the North American Numbering Plan Administrator (“NANPA”).** This would provide NANPA with a source of hard number utilization data needed for effective management of numbering resources.
- **Establish that “Months to Exhaust” is the proper measure of need for numbers.** Unlike utilization figures, realistic projections of months to exhaust take carriers’ growth rates into account, including seasonal growth.
- **Require NANPA to audit carriers’ “Months to Exhaust” worksheets.** This would highlight inefficient usage and strongly discourage carriers from requesting NXX codes before there is a real need based on established assignment guidelines.
- **Establish procedures for FCC enforcement.** Compliance with number conservation policies should be ensured by providing FCC enforcement mechanisms.

DISCUSSION

I. WIRELESS LOCAL NUMBER POOLING IS NOT NEEDED TO ENSURE EFFICIENT WIRELESS USE OF NUMBERING RESOURCES

In response to the *MO&O*, AirTouch shows herein that wireless carriers are efficient users of numbering resources without need for LNP-based pooling, due to their reliance on a limited number of rate centers from which they pull their numbers. Subjecting wireless carriers to LNP is not warranted on legal, technical, or policy grounds, and forbearance is fully justified.

Subjection of wireless carriers such as AirTouch to number portability and number pooling would require them to go to a great expense to implement a complex technical scheme from which

neither the carriers nor the public would reap any benefit. Given wireless carriers' utilization rates, no numbers would be made available for pooling in the highly concentrated markets where number shortages exist, because those are the very markets where wireless carriers' concentration into a limited number of rate centers already results in the most intensive, most efficient usage. Wireless carriers should not be subject to LNP just to enable their participation in LNP-based number pooling, because as efficient users of numbers they will have nothing to offer the pool. Accordingly, numbering resource concerns do not support application of LNP or LNP-based pooling to wireless carriers.

A. Wireless Industry Uses Numbering Resources Efficiently

The wireless industry has been an efficient, responsible user of numbering resources. Within a given calling area, wireless carriers will typically use NXX codes from only a limited number of the wireline local exchange carrier ("LEC") rate centers. Wireless usage tends to be concentrated in major traffic corridors and dense downtown areas; *i.e.*, people use mobile services primarily where they live and work. Subscribers are consolidated from smaller, less heavily trafficked communities into rate centers from the dominant usage areas to create administrative efficiencies.

By pooling internally, a wireless carrier needs to track with less specificity exactly which rate center a customer is most closely tied to, exactly how many codes are left in each rate center, and exactly which rate centers are going to have the most growth in the near term. A carrier with 90% utilization in a rate center with 100,000 numbers has 10,000 numbers available to assign to new customers from a very wide area. Yet its 90,000 customers may be pulled from 40 or more different rate centers. The wireless industry thus provides real-world data demonstrating the benefits of rate center consolidation: If it did not make sense from a business perspective, we would not be doing it today.

This practice of concentrating demand for NXX codes into a few rate centers is a market-based solution that promotes efficiency. It minimizes the number of distinct NXX codes required to accommodate a given level of customers and maximizes the utilization rate for the NXX codes. This efficient usage also means that the wireless industry tends to use NXX codes up rapidly — as a given NXX code fills up, there is an immediate need for an additional NXX code to handle anticipated growth.

1. Wireless Industry Use of Numbering Resources

A rapid turnover of NXX codes results from this efficient utilization, especially when combined with the high growth rate of the wireless industry, estimated by CTIA to be about 40% annually. Because of this rapid growth in subscribers, the wireless industry needs numbers constantly, and in large quantities. Wireless carriers in major markets, where the pressure on numbering resources is greatest, do not typically sit on NXX codes full of unoccupied numbers; they fill entire codes rapidly because of subscriber growth. A wireless carrier with 500,000 subscribers with even a very conservative 10% annual growth rate would completely fill five new NXX codes in the space of a year.

In many areas, NXX codes are filled in just a few months because of the funneling of new customers into codes in a limited number of rate centers.⁵ The volume of numbers used can vary considerably on a seasonal basis. The peak season may provide a substantial portion of a carrier's growth for the year, causing the carrier to need additional NXX codes to accommodate the peak-season growth. In one market, for example, AirTouch may consume a code every few months for

⁵ Obviously, new customers are served not only by assignment of numbers from the most recently allocated NXX, but also by reassigning numbers of former customers in previously filled NXX codes, after a suitable aging period.

most of the year, and then use three or four codes in just the month of December. That usage amounts to thirty to forty thousand numbers in a single month.

The wireless industry needs numbers to accommodate real, continuous customer growth. As a result, participation by wireless carriers in number pooling would have minimal impact on efficient number utilization. First, their high utilization rates mean that they would have few, if any, numbers to contribute to pools; second, their use of only a limited number of rate centers for their NXX codes would make their pooled numbers available for wireline assignment only in those rate centers, instead of area-wide.

Third, their rapid subscriber growth causes them to need numbers in large quantities, which pooling would not facilitate. A wireless carrier in a major market may need 10,000 numbers or more to accommodate growth in a single rate center in a short period of time, as in the AirTouch example above. It is far more efficient for that carrier to be assigned enough entire NXX codes to meet its short-term needs than for the carrier to have to obtain repeated blocks of 1000 numbers.

One factor that has facilitated wireless carriers' more limited number of rate centers is what the NANC Report describes as the Extended Local Calling Area ("ELCA"), an arrangement with LECs to extend local calling areas for land-to-mobile calls. These interconnection arrangements eliminate toll charges for landline calls to mobile numbers, stimulating inbound wireless calls, in exchange for higher interconnection charges paid by wireless carriers. Recently, LECs have moved to eliminate this option over the protests of wireless carriers, who argue that eliminating extended local calling will force them to take numbers from multiple rate centers in order to avoid toll charges for people calling mobile numbers. AirTouch's experience in California⁶ demonstrates that elimination of ELCA does increase inefficiency somewhat, *but not significantly*. The administrative

⁶ PacBell in California phased out its land-to-mobile call options for AirTouch in the most recent (1996) interconnection negotiations.

costs of tracking code utilization in 30 or 40 rate centers in each NPA is simply too high to justify, even if it means customers will receive fewer calls because of inbound toll charges. AirTouch increased its number of rate centers, on average, from 2 to 4 per NPA, not to 30 or 40. Elimination of ELCA should not be used to justify mandatory number pooling, absent data demonstrating that wireless carriers in fact pull code from rate centers with no probability of filling those codes in a reasonable number of months. Again, AirTouch's experience does not support this conclusion.

2. AirTouch Utilization Data

While AirTouch may or may not be entirely representative of the industry, its experience illustrates the efficiency levels that can result from wireless carriers' use of a limited number of rate centers to handle high growth. In California, for example, there are 735 separate rate centers — about 30 rate centers in each of the 24 NPAs. AirTouch uses NXX codes from only 42 rate centers, 5.7% of the total, and typically draws NXX codes from only one to four rate centers in a given NPA. Similarly, in Michigan, there are 867 rate centers in the NPAs served by AirTouch, but it uses NXX codes in only 60 of them, or about 7%. AirTouch is able to rely on a relatively small number of NXX codes for growth in each area at any given time, instead of spreading new customers among partially vacant NXX codes in every rate center. This results in a high utilization rate exceeding 80% in the vast majority of AirTouch markets.

In response to the Commission's request in the *MO&O* for information on utilization of wireless numbering resources, AirTouch has accumulated code utilization information from each of its major markets.⁷ The data in the accompanying table demonstrate AirTouch's efficient use of

⁷ Because some of AirTouch's business is conducted through resellers, numbers must be set aside so that resellers can activate phones at the point of sale. The reseller numbers, which represent less than 5% of the total, are considered "assigned but unavailable" and are thus deemed in use in calculating number utilization. On the other hand, the "dealer pool" numbers earmarked for AirTouch's dealers and agents are considered *available* for utilization purposes, so these numbers do not affect the utilization rate at all. Also, AirTouch sets aside a negligible quantity of numbers

numbering resources in all of its markets. The high utilization rates — over 80% in virtually all markets — reflect AirTouch's rapid subscriber growth rate and its practice of serving customers from a very small number of rate centers per NPA.⁸

In California, for example, there are on average over 30 rate centers per NPA, but AirTouch Cellular typically pulls all of its numbers from one or two rate centers per NPA. Because all of its subscribers from throughout an area code are consolidated into a few rate centers, AirTouch's growth throughout the larger market areas ensures high fill rates.

The efficiency gains from using only a few rate centers are highlighted when there are numerous NPAs in a single metropolitan region. For example, in Los Angeles, AirTouch is the third-largest holder of NXX codes in the 310 NPA, after the two ILECs, Pacific Bell and GTE. AirTouch, however, pulls all of its NXX codes from just two of the fifteen NPA 310 rate centers, and its utilization rate in the NPA is 96%. Adjacent to this is the most geographically concentrated

AIRTOUCH CODE UTILIZATION RATES for Top 22 MSA Markets	
City	Percent Utilization
Albuquerque	86%
Atlanta (including new overlay)	68%
Cincinnati	90%
Cleveland	89%
Columbus	89%
Dayton	89%
Denver	90%
Denver (new overlay)	57%
Detroit	84%
Flint	78%
Grand Rapids	85%
Lansing	86%
Los Angeles	95%
Minneapolis	96%
Omaha	95%
Phoenix	86%
Portland	89%
Sacramento	85%
Salt Lake City	84%
San Diego	97%
Seattle	72%
Spokane	93%
Data are current as of November 1998 for all markets except Flint, Grand Rapids, and Lansing, which are current as of July, 1998.	

for test purposes (fewer than 0.001%), and an average of 2.5% of its numbers are assigned but unavailable due to aging prior to being placed in the "unassigned and available" pool.

⁸ The table includes only urban markets, which have a far greater impact on number exhaust than rural markets. AirTouch's rural networks also interconnect using Type 1 interconnection, which does not require an entire NXX code, permitting efficient use of numbers in areas with low demand.

area code in Los Angeles, NPA 213, which covers just four square miles. Despite its small size, this NPA also contains fifteen rate centers. AirTouch uses just one of them.

AirTouch policy requires a utilization rate of 78% before markets can apply for an additional code, except in jeopardy situations.⁹ In addition, AirTouch complies fully with industry standards regarding the maximum lead time for applying for codes. When markets are declared in jeopardy, aggressive steps are taken to limit code access, increasing the length of time it may take to get additional codes. For example, lotteries are conducted in more than eight AirTouch states. A carrier's request for a code may not be drawn for months, requiring a much longer lead time and lower fill rate before applying. Nevertheless, AirTouch has utilization rates above 90% in a number of markets where jeopardy has been declared, reflecting the severe number shortage faced by all industry participants and demonstrating efficient use of this scarce resource.

These high utilization rates mean that AirTouch would have no numbers to contribute to pools, since it is efficiently using full 10,000-number NXX code blocks. In all but three of the markets summarized in the table above, AirTouch's utilization rate was 78% or higher, and the three remaining markets had low utilization rates due to the use of new split or overlay NPA codes. In addition, if it were subjected to pooling, AirTouch would have a very limited number of codes available for pooling, since it uses codes from only a small number of rate centers per NPA.

B. No Need for Pooling

Pooling simply is not needed to ensure efficient use of numbering resources by wireless carriers. For that reason, the numbering optimization concerns that are at the base of the

⁹ Because of the substantial lead time for obtaining NXX codes in jeopardy situations, AirTouch needs to apply for an NXX when it has reached 50 to 60% utilization in order to have numbers available once its existing codes are exhausted.

Commission's consideration of LNP-based pooling do not constitute a basis for subjecting wireless carriers to an LNP requirement. Grant of the pending forbearance petition is wholly justified.¹⁰

The Commission's principal reason for requiring wireless LNP deployment was to promote competition among wireless carriers — to give new CMRS entrants, such as PCS, the ability to compete with established wireless carriers, such as cellular, that have a “head start” in the marketplace. The premise that LNP is needed to promote inter-wireless competition is not supported by the marketplace. The lack of LNP has not impeded competition; indeed, PCS competition is flourishing. Price, coverage, and customer service, not numbers, are the keys to wireless competition. When CMRS carriers must invest in new, costly changes, such as LNP, the money spent becomes unavailable for providing expanded, improved, and lower-priced service — all of which are more important to wireless customers than portable numbers.

A second factor cited by the Commission to support wireless LNP was the ability to stimulate competition to the local loop. Based upon AirTouch's market research, the key barriers to substitution of wireline by wireless service are price, signal quality, and network reliability. As prices fall and digital technology is more widely deployed, these factors are causing a migration of wireline traffic to wireless networks that is expected to accelerate over time. However, this form of local competition does *not* entail disconnecting wireline service and porting numbers to a new provider, which is also unlikely to happen near-term in light of highly subsidized flat-rate residential calling programs in place today.

¹⁰ Wireless number pooling would also impede compliance with the Telephone Consumer Protection Act, which (among other things) prohibits most autodialed calls to wireless telephone numbers. Currently, these numbers are identifiable by NXX codes assigned to wireless carriers. If number pooling is extended to wireless carriers, wireless customer numbers will no longer be readily identifiable. Accordingly, number pooling will make it more difficult, or impossible, for telephone solicitors to comply with this statute, leading to increased violation of this law. *See* 47 U.S.C. § 227; *see also* 47 C.F.R. § 64.1200.

Moreover, number portability between wireless and wireline carriers involves issues not yet resolved in industry bodies. These barriers include the disparity between wireless and wireline rate center practices. Wireless customers enjoy huge “local” extended calling areas (in some cases extending nationwide) that have developed in response to intense wireless competition. As a result, wireline carriers are at an enormous disadvantage in attracting wireless customers to port numbers to their networks where tiny local calling areas are the norm. This “one-way street” for wireline-wireless portability has also led the wireline industry to oppose near-term adoption of wireless LNP.¹¹

The cost of LNP implementation is enormous — AirTouch has estimated that it alone would have to spend \$55-75 million dollars to implement.¹² Resources and engineering talent will be diverted, instead of being directed toward more productive goals, such as improving coverage and introducing new and better services in response to consumer demands. Higher costs will also keep rates higher than necessary.

In short, wireless local number portability will produce *no* foreseeable benefits for the public, will actually prevent service improvements that would otherwise be made, and will drive up costs to the carriers and, ultimately, their customers. Forbearance is thus appropriate from a policy perspective.

From the legal perspective, wireless carriers are not LECs, as defined in the Act,¹³ and accordingly are not subject to the number portability obligations imposed by Section 251(b)(2) only

¹¹ See North American Numbering Council, Local Number Portability Administration Working Group Report on Wireless-Wireline Integration (May 8, 1998), Wireline Position Paper.

¹² See Comments of AirTouch Communications, *Forbearance from CMRS Number Portability Requirements*, CC Docket 95-116 (filed Feb. 23, 1998), at 2-3.

¹³ See 47 U.S.C. § 153(26).

on LECs.¹⁴ For that reason, wireless carriers cannot be simply classed together with LECs and subjected to number portability requirements. There must be an affirmative public interest reason for doing so, and this is absent. In fact, as discussed, there are valid public interest reasons for treating wireless carriers differently from LECs in regard to number portability, and thus for granting the forbearance petition: LNP implementation poses unique difficulties for wireless carriers, given their larger service areas, subscriber mobility, and roaming.

In sum, as the foregoing and the record of the CTIA forbearance proceeding show, there are compelling legal and policy reasons for *not* subjecting wireless carriers to LNP in the first place and for exempting them now.

II. NUMBER OPTIMIZATION AND CONSERVATION MEASURES

The wireless industry shares the Commission's concern about the numbering shortage. AirTouch participates actively in the Industry Numbering Committee ("INC"), upon whose efforts the Commission, NANC, and NANPA have relied heavily in addressing the difficult issues concerning the future of the North American Numbering Plan.¹⁵ Solutions are clearly needed, to ensure that wireless and wireline carriers alike have the numbering resources needed to accommodate growth. While there needs to be a degree of national uniformity, the approach taken to number conservation and optimization should take into account the wide variety of different types of carriers and their special circumstances.

¹⁴ See 47 U.S.C. § 251(b)(2).

¹⁵ See, e.g., *Pennsylvania Public Utility Commission*, FCC 98-224, 1998 FCC LEXIS 5036, at ¶ 21 n.77 (Sept. 28, 1998) (*Pennsylvania Order*); *Administration of the North American Numbering Plan*, CC Dockets 92-237 and 95-155, *Third Report and Order*, 12 F.C.C.R. 23,040, 23,047 (1997); NANC Report, Attachment 3-1 (Industry Numbering Committee, *Initial Report to the North American Numbering Council on Number Pooling* (Jan. 16, 1998)).

A. There Should Be National Number Conservation and Optimization Standards, Implemented at the State Level

A nationwide solution is needed to a national problem. The FCC has plenary jurisdiction over numbering issues pursuant to Section 251(e)(1) of the Communications Act.¹⁶ While the particular facts concerning number conservation will vary from place to place, the states cannot be left to pursue widely divergent approaches.¹⁷

The need for a national approach to number conservation and optimization has become particularly urgent in light of the fact that many telecommunications carriers have networks of systems spanning the nation. Increasingly, these systems are operated in an integrated, unitary fashion. This is clearly the case in the wireless industry, where numerous companies have operations spanning the nation that are run as a unit, instead of as distinct market-by-market operations. It is also increasingly true in other telecommunications sectors, particularly the competitive LEC (“CLEC”) area, where the national interexchange carriers (“IXCs”) have been active, and even with respect to incumbent LECs (“ILECs”).

The FCC has a responsibility to establish meaningful policies at the federal level, so that states are not left to solve the number exhaust problem without federal guidance. A national framework is needed, with states being delegated authority to implement the details of this national plan in accordance with federal standards and guidelines, in light of local circumstances.

¹⁶ 47 U.S.C. § 251(e)(1). Indeed, the Commission first asserted plenary jurisdiction over the U.S. administration of the North American Numbering Plan in 1986, ten years before Section 251 became law, in response to numbering issues raised by the wireless industry. *See FCC Policy Statement on Interconnection of Cellular Systems*, 59 Rad. Reg. 2d (P&F) at 1284.

¹⁷ *Pennsylvania Order* at ¶ 21.

B. Rate Center Consolidation

Rate center consolidation offers the most “bang for the buck” as an approach to number conservation that will greatly assist over the long term. A major factor driving NXX code usage is that wireline carriers seek to obtain NXXs in each rate center where they provide (or intend to provide) wireline local exchange service. In some cases (*e.g.*, California), they are required to do so. In metropolitan areas with many rate centers, this causes each service provider to need multiple NXXs.¹⁸ These resources may not be efficiently used, however, because the number of potential customers in a rate center may be insufficient to result in a high utilization rate. For example, in California, where the number shortage is acute, the majority of new NXX code allotments in 1998 went to CLECs, even though their utilization level is low.¹⁹

The demand for multiple NXX codes can be decreased, and the relative utilization of NXX codes can be increased, through rate center consolidation. By reducing the number of rate centers in a metropolitan region, demand for NXX codes will be reduced because carriers who need a presence in every rate center will be able to accomplish that objective with a smaller number of NXX codes. The Colorado PUC summed this point up as follows:

If the rate centers . . . are consolidated into fewer rate centers, then facilities-based providers of local exchange service will need fewer NXX codes in order to provide local exchange service throughout the territory at issue. Such a result will reduce the demand for NXX

¹⁸ See *Rate Center Consolidation With the 303 Area Code*, Docket No. 97M-548T, *Decision and Order*, Decision No. C98-439, at 5-6 (Colorado PUC April 29, 1998) (*Colorado PUC Decision*) (“It is necessary for each facilities-based service provider to be assigned an NXX code for each rate center in which it provides service.”)

¹⁹ See *Pacific Bell’s Emergency Petition to Modify Decision 96-12-086, Order Instituting Rulemaking on the Commission’s Own Motion into Competition for Local Exchange Service*, R.95-04-043 (Cal. PUC, filed Oct. 15, 1988), at 20-21 (CLECs have received more than 60 percent of NXX codes statewide in 1998 and are estimated to have less than a 25 percent utilization rate).

codes, improve number utilization, and prolong the life of the area code(s)²⁰

In some cases, rate center consolidation permits the number of codes needed to be reduced dramatically. For example, the NANC Report cites the example of Texas:

[Rate center consolidation] was implemented in Dallas, Houston, Austin, Fort Worth, and San Antonio, Texas within four months of regulatory approval for rate centers with common local calling scopes. Southwestern Bell has consolidated 108 rate centers to 31 with no changes in local calling scopes and no customer confusion/education.²¹

The scope of the Colorado consolidation was comparable, with 43 rate centers reduced to 16, and U S WEST's 38 rate centers reduced to 11.²² In one Texas market, however, San Antonio, there was an even more dramatic consolidation — 29 rate centers were reduced to one.²³ Moreover, rate center consolidation achieves this increased efficiency without the expense and complications introduced by LNP-reliant solutions.

Rate center consolidation not only reduces carriers' need for multiple NXX codes, but also increases the efficiency of code utilization and thereby keeps unused NXX codes available for future use. For example, a new CLEC seeking to serve Colorado's 303 NPA would need 16 codes after consolidation, instead of 48. Its customers would thus be accommodated in one-third the number of NXX codes, and its efficiency, as measured by utilization percentage, would thus be three times higher, while freeing up 32 codes for future growth in the NPA. Its most heavily occupied NXX codes would reach high utilization levels more rapidly, and additional codes would be assigned only where needed. Likewise, ILECs' and established CLECs' need for additional codes would be

²⁰ See *Colorado PUC Decision* at 6.

²¹ NANC Report § 1.3 at 19 n.3.

²² See *Colorado PUC Decision* at 5-6, 8.

²³ See NANC Report § 1.5.1 at 20.

diminished, because they would be able to use their existing assigned NXX codes to accommodate growth more efficiently. In short, rate center consolidation can result in very substantial gains in code utilization efficiency.

When done for purposes of number conservation, rate center consolidation can be accomplished in a revenue-neutral manner. The revenue effects occur as the result of (a) the potential elimination of tolls among the consolidated rate centers and (b) the expansion of free calling to and from adjoining rate centers. These effects can be minimized by careful planning of a particular consolidation, based on local circumstances.²⁴ The Colorado decision was sensitive to the need to limit the expansion of local calling areas in order to keep the rate center consolidation relatively revenue-neutral.²⁵ Similarly, the Texas consolidation cited above involved no changes in local calling scopes.²⁶

Consolidation of rate centers will thus better meet the needs of today's marketplace than maintaining a historical patchwork of tiny rate centers. Today's consumer needs service over a wider area than before, given how small communities have evolved together into cohesive metropolitan areas. Wireless carriers already reflect the reality of the consumer's broader geographic

²⁴ The effect on intra-rate-center toll revenue is limited to cases where the rate centers being consolidated are not already within a local calling area and thus significant toll traffic within the consolidated rate centers will be eliminated. Accordingly, the revenue impact due to expansion of local calling to and from adjacent rate centers (and thus elimination of toll revenue) may be limited by principally targeting rate centers within a local calling area for consolidation, or by consolidating into groups of new rate centers, instead of a single new rate center. *See Colorado PUC Decision* at 7-8.

²⁵ *See Colorado PUC Decision* at 7-8.

²⁶ *See NANC Report* § 1.3 at 19 n.3. The potential loss of local toll revenue can pose a major obstacle to rate center consolidation, however, especially when there are very small and inefficient rate centers. California, for example, has been resistant to rate center consolidation, even though it has an enormous number of rate centers — 735 — that has led to highly inefficient NXX code usage. *See generally* Pacific Bell's Emergency Petition. In the central Los Angeles area code, NPA 213, for example, there are fifteen rate centers, even though the entire NPA is only four square miles.

focus by providing ever wider-area “local” calling. Rate center consolidation for wireline carriers will thus emulate the wireless industry’s model, which responds to market forces, and will stimulate greater convergence between wireless and wireline service.

This will also ultimately benefit CLECs, in particular. As new entrants, CLECs seek to serve today’s metropolitan or larger communities, not the narrowly defined geographic rate areas that reflect the past reality. Nevertheless, the layout of the wireline telephone network causes new CLEC entrants to seek to establish a “local presence” in each rate center by occupying an NXX code, even though they are trying to provide service throughout a region. Rate center consolidation will diminish the need for new entrants to conform to historical patterns of local service development, reduce their demand for duplicative NXX codes, and lower the cost and complexity of their introduction of competitive service across broad areas.

The FCC should, accordingly, promote rate center consolidation as the highest priority method of number conservation. In many instances, consolidation of rate centers may reduce or eliminate the need for wireline number pooling.

C. Additional Measures Promoting Efficient Utilization

The Commission should also take further measures to promote efficient utilization of numbering resources beyond that made possible through rate center consolidation. In particular, the Commission should endorse consideration of thousands-block pooling for wireline carriers and mandatory ten-digit dialing, in appropriate cases.

1. Thousands-Block Number Pooling for Wireline Carriers

Thousand-number block pooling will minimize adverse effects on efficient wireline users of numbering resources, because such service providers will have little need to turn unutilized number blocks in to the pool and will be able to project their needs for additional number blocks accurately. The other LNP-based pooling methods, however, cost more and take longer to

implement²⁷ and appear chiefly to facilitate the provision of “vanity” numbers by a carriers that would otherwise lack access to the numbers within another carrier’s NXX code block. These techniques would not provide nearly the efficiency increase of thousands-block pooling, particularly in light of their cost. Number pooling should be implemented, if at all, only in the most cost-efficient and least disruptive manner, and only to accomplish the objective of number conservation. Number pooling clearly should not be designed to maximize the ability of a carrier to “cherry-pick” numbers deemed valuable — particularly since this involves costs.

2. Mandatory Ten-digit Dialing

The Commission should also require states to consider other approaches to the problem posed by the historical dispersion of rate centers throughout a metropolitan area. The most promising approach is mandatory ten-digit dialing, which is already required when overlays are used, and will become essential, as a practical matter, in areas with a large number of NPAs. Even where it is not presently required, however, it can provide the benefit of enlarging the pool of available numbers.

Mandatory ten-digit dialing should be encouraged for states and metropolitan areas in advance of encountering number shortages, as well as those that have already reached the crisis state, because it can eliminate the need for protected NXX codes, thereby significantly increasing the number of NXX codes that can be assigned in an area, particularly where multiple NPA codes are in use, with multiple protected NXX codes in each NPA.²⁸ It will also facilitate the use of overlays,

²⁷ See NANC Report § 4.4.1 at 46-47, § 5.4.1 at 104, § 6.4.1 at 125-27 (costs of the three alternatives); see *id.* § 4.3 at 43-46 (four to six years or more needed for individual telephone number pooling), § 5.3-5.3.3 at 95-104 (10 to 19 months needed for thousands-block number pooling), § 6.3 (9 to 16 months prior to an order for unassigned number porting for a specific NPA, and then 8 to 14 months for initial implementation).

²⁸ The number of protected codes can be significant — the NANC report indicates that in one market, the number of available NXX codes would be *doubled* upon implementation of 10-digit dialing. See NANC Report § 10.5.3.1 at 153 n.34.

which are preferable to NPA splits as a way to increase numbering resources in many areas. The Commission already requires mandatory ten-digit dialing where overlays are implemented.²⁹ Thus, introduction of this dialing mode will tend to reduce resistance to the introduction of overlays.

This would be especially appropriate in areas that have already undergone an NPA split, or are preparing for one, because the number shortages often continue after a split. In California, for example, the number of NPA codes has recently increased 70%, from 13 to 24 codes (and will reach 35 by the year 2000), and yet the number shortage grows continually worse. Despite the new NPAs, NXX code rationing was begun in 1996, and the number of unfilled NXX code requests has climbed steadily, reaching 822 in September of this year.³⁰

No action should be taken at this time with respect to expansion of the "D digit" (the first digit of the NXX code) to permit the use of zero or one. While this would provide a significant expansion of the number of NXX codes available in an NPA, it also presents a number of obstacles, as noted in the NANC report. This and related issues concerning expansion of the North American Numbering Plan are currently being explored by the Industry Numbering Committee, and Commission action at this time would be premature.

²⁹ See 47 C.F.R. § 52.19(c)(3)(ii); *Public Utility Commission of Texas Petition for Expedited Waiver of 47 C.F.R. Section 52.19(c)(3)(ii) for Area Code Relief*, DA 98-2141(CCB Oct. 23, 1998).

³⁰ See Pacific Bell's Emergency Petition, *supra*, at 6-11.

III. THE RESPECTIVE ROLES OF FCC AND INDUSTRY

The Commission's jurisdiction over the administration of numbering in the United States can best be exercised by working with the telecommunications industry to ensure that guidelines and standards are based on the best possible information, and are complied with.

A. COCUS Data

Any decision on how to implement number conservation should be informed by the best available information. AirTouch has been active with other carriers in defining parameters for the information collection and in contributing COCUS data to NANPA. The Commission should issue rules requiring all holders of numbering resources to provide COCUS data to NANPA. This would yield representative efficiency data on a variety of different types of carriers.

The collection and use of number utilization data must be in accordance with FCC-established rules, given that the FCC has been granted plenary authority over numbering issues within the United States. AirTouch opposes any requirement that individual carriers be required to provide carrier-specific number utilization data directly to state regulators, due to the commercial and competitive sensitivity of such data. Such data should instead be aggregated by NANPA and obtained by the state from NANPA on an aggregate basis.

B. "Months to Exhaust" Is the Best Tool for Allocating Numbers

AirTouch has supplied utilization data above in response to the Commission's invitation and in the interest of a more complete record. Nevertheless, any single figure, such as utilization rate, can be a misleading measure of efficiency, and reliance on such a measure, standing alone, in making a policy decision would be a mistake. This is especially the case when the Commission does not have a representative sampling even of this statistic from all segments of the industry. Accordingly, AirTouch suggests that the Commission take steps to compile a variety of efficiency

measures regarding wireless, ILEC, and CLEC use of numbering resources, including both utilization rates and months to exhaust.

To the extent a single tool is used as a yardstick for efficiency in allocating numbering resources, it should be “Months to Exhaust.” Currently, the Industry Numbering Committee standards call for a carrier seeking an additional code to determine whether its current and projected usage warrants the new code based on data computations in a “months to exhaust” worksheet.³¹ This measure was adopted because of its even-handedness in application to different types of carriers. One significant problem with using carriers’ utilization ratios to measure relative efficiency is that utilization ratios tend to vary significantly over the course of time, particularly when demand or growth is seasonal. Thus, for example, a carrier may have a low utilization ratio in the autumn because it has added capacity that will be completely filled by expected subscriber growth in December. Utilization data provides only a snapshot in time of a carrier’s dynamically changing use of number resources. Using utilization level as a threshold for adding numbers shares this same flaw. A carrier may be unable to obtain numbers needed to handle its peak season if it is below the threshold before the peak season begins.

Because months to exhaust is a more forward-looking measure, it is a better measure than percent utilization, an historic measure poorly suited to today’s dynamic telecommunications industry.

C. Audit of “Months to Exhaust” Worksheets

In addition, the Commission should require an audit by NANPA of carriers’ “months to exhaust” worksheets in order to compile representative data covering a variety of types of carriers

³¹ See Alliance for Telecommunications Industry Solutions, Industry Numbering Committee, *Central Office Code (NXX) Assignment Guidelines*, INC 95-0407-008, at Appendix B (July 13, 1998).

nationwide. Currently, these worksheets must be completed and retained in a carrier's files when it seeks additional codes for growth. As a result, the valuable data they contain has never been aggregated. These data would be, in aggregate form, the most useful figures for determining the relative efficiency of NXX usage of different types of carriers. An audit would also have the benefit of encouraging carrier compliance with the months to exhaust process. An audit function would provide data on how well carriers are complying with the process and how accurately they are forecasting months to exhaust. A comprehensive audit would thus both provide data for evaluation and provide an incentive for carriers to develop and record this data accurately in the future.

Currently, AirTouch is co-chairing a NANPA oversight working group that is drafting audit procedures that will be presented to NANC in January. AirTouch urges the Commission to require prompt completion of such audit procedures.

D. Enforcement Procedures


In addition, the Commission should establish enforcement procedures to ensure compliance with its number conservation and optimization policies. Carriers should be obliged to comply with any recordkeeping requirements or optimization thresholds (*e.g.*, months-to-exhaust or utilization thresholds) that are applicable to them. Sanctions for misleading or failing to comply with critical number exhaust guidelines — whether promulgated by the FCC or industry standards groups — are effective and essential.

CONCLUSION

For the foregoing reasons, AirTouch urges the Commission to grant the pending wireless LNP forbearance petition. As discussed, number pooling is unnecessary and inappropriate for wireless carriers, and will impose substantial costs with no benefit in return. This is equally true of local number portability for wireless carriers. AirTouch also supports establishment of federal guidelines for state implementation of rate center consolidation and other optimization measures.

Respectfully submitted,

AIRTOUCH COMMUNICATIONS, INC.

By: 
Pamela J. Riley
David A. Gross
AirTouch Communications, Inc.
1818 N Street, N.W., Suite 800
Washington, D.C. 20036
(202) 293-3800

December 21, 1998

CERTIFICATE OF SERVICE

I, Marionetta Holmes, hereby certify that on this 21st day of December, 1998, a copy of the foregoing "Comments of Airtouch Communications, Inc." were served on the following by hand delivery:

The Honorable Susan Ness
Federal Communications Commission
1919 M Street, N.W., Room 832
Washington, D.C. 20554

Kathryn Brown
Federal Communications Commission
1919 M Street, N.W., Room 814
Washington, D.C. 20554

The Honorable Michael K. Powell
Federal Communications Commission
1919 M Street, N.W., Room 844
Washington, D.C. 20554

Jeanine Poltronieri, WTB
Federal Communications Commission
2025 M Street, N.W., Room 5002
Washington, D.C. 20554

The Honorable Harold W. Furchtgott-Roth
Federal Communications Commission
1919 M Street, N.W., Room 802
Washington, D.C. 20554

Tom Sugrue, WTB
Federal Communications Commission
2025 M Street, N.W., Room 5002
Washington, D.C. 20554

The Honorable Gloria Tristani
Federal Communications Commission
1919 M Street, N.W., Room 826
Washington, D.C. 20554

Yag Varmer, Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W., Room 500
Washington, D.C. 20554

Blaise A. Scinto, Common Carrier Bureau
Federal Communications Commission
1919 M Street, N.W., Room 544-F
Washington, D.C. 20554

Jeannie Grimes, Common Carrier Bureau
Federal Communications Commission
2000 M Street, N.W., Suite 235
Washington, D.C. 20554 (2 copies)

International Transcription Services
1231 20th Street, N.W.
Washington, D.C. 20036



Marionetta Holmes